

REMARKS

Applicants, their principal representatives in Germany, and the undersigned have carefully reviewed the first Office Action in the subject U.S. patent application. In response, the claims of the application, as set forth in the Preliminary Amendment, which was filed with the application, have been amended. It is believed that the claims, as filed, and even more clearly as amended, are patentable over the prior art cited and relied on by the Examiner, taken either singly or in combination. Reexamination and reconsideration of the application, and allowance of the claims is respectfully requested.

The subject application discloses, and claims a printing group for a rotary printing press. As may be seen in the sole drawing figure, the printing group includes a forme cylinder 21, a transfer cylinder 02 and a counter-pressure cylinder 01. All three cylinders are supported for rotation between spaced side frames 13 and 14. Each of the transfer cylinder 02 and the counter-pressure cylinder 01 is provided with support elements 07 and 06, respectively, which are preferably in the form of bearer rings, as may be seen in the drawings. As discussed in the specification of the application, and as shown in the drawing, the forme cylinder 21 is not provided with a similar support element. Its engagement pressure with the transfer cylinder is adjusted by the provision of eccentric bushings 18 and 19. These eccentric bushings 18 and 19 allow a shaft distance between the forme cylinder and the transfer cylinder to be changed during operation of the printing group of the rotary printing press.

As discussed at paragraph 009 of the Substitute Specification, the support element; i.e., the bearer rings 06 and 07 are not provided at the forme cylinder. The

contact pressure of the forme cylinder with the blanket or transfer cylinder can be varied as a function of the type of printing forme or formes provided on the forme cylinder. This is discussed at paragraphs 0015, 0016 and 0017 which details the problems that can exist, particularly if the forme is one that is usable in waterless offset printing. The contact pressure between the forme cylinder and the transfer cylinder needs to be changed in accordance with the properties of the waterless printing forme. As discussed in paragraph 0018, this contact pressure between the forme cylinder and the transfer cylinder can be changed, in accordance with the present invention, by varying the shaft distance between the forme cylinder and the transfer cylinder. This contact pressure adjustment is preferably set during an ongoing printing process, as also discussed at paragraph 0018 of the Substitute Specification. Such a variance or adaptation of the forme cylinder to different positions, during the ongoing printing process, cannot be readily accomplished if the forme cylinder were to be provided with bearer rings that would engage similar bearer rings on the transfer cylinder.

In contrast, it is preferable that the transfer cylinder and its cooperating counter-pressure cylinder are provided with their respective support elements, such as the depicted and described bearer rings. Such bearer rings are typically prestressed and are usable to reduce undesirable cylinder vibrations and to make clean and clear printing possible. Typically, such bearer rings are forced against each other under substantial pressure to accomplish the desired prestress which will dampen the unwanted vibrations. Since the forme cylinder, in accordance with the present invention, does not include such support elements, as has been customary in the art, a considerably reduced force is required to set or to adjust a contact pressure between

the forme cylinder and the transfer or blanket cylinder. The setting of the contact pressure is thus made much easier by the elimination of the bearer rings or other support elements from the forme cylinder.

The support elements remain in those locations where they are needed, as discussed in paragraph 0010 of the Substitute Specification. This is essentially between the transfer cylinder and the counter-pressure cylinder. The provision of such support elements in these locations is required to insure smooth running of the cylinders and to eliminate vibrations which may be otherwise caused by the rolling off of channels on the transfer cylinder and the counter-pressure cylinder.

In the first Office Action of December 4, 2006 in the subject application, claims 46 and 47 were objected to as being of improper dependent form. In response, claims 44 and 45, from which claims 46 and 47 depend, respectively, have been amended. It is believed that these changes overcome the objections to claims 46 and 47.

Claims 26-38 and 41-55 were rejected under 35 USC 102(b) as being anticipated by U.S. patent No. 6,227,111 to Dawley. Claims 39 and 40 were rejected under 35 USC 103(a) as being unpatentable over Dawley in view of U.S. patent No. 5,487,338 to Lewis. Claims 51-61 were rejected under 35 USC 103(a) as being unpatentable over Dawley in view of U.S. patent No. 5,784,957 to Rau.

While independent claims 26 and 29 have been amended to more clearly define the present invention over the prior art cited and relied on in their rejection, a careful and complete reading of the Dawley reference reveals several major discrepancies between its actual teachings and disclosures in comparison to the teachings and disclosures attributed to it in the Office Action by the Examiner who was then

responsible for the subject application. The following discussion will be directed to an effort to clarify the understanding of the Dawley reference and to correct the inaccuracies set forth in the Office Action of December 4, 2006.

There are two basic and underlying differences between the Dawley reference and the subject invention, as recited in both of claims 26 and 29. Initially, the Dawley reference uses bearer rings on the forme cylinder and the transfer cylinder and not on the counter-pressure cylinder. Secondly, the Dawley apparatus is intended for adjustment before the printing unit is put into service, not during an ongoing printing process. The Office Action is also inaccurate in its assertion that Dawley somehow is directed to the use of waterless printing formes. This latter incorrect assertion is not a misstatement of fact so much as it is the result of a faulty reasoning process.

Turning initially to the issue of the location of supports or bearer rings, Dawley very clearly shows a printing unit that includes an upper plate cylinder 12, an upper blanket cylinder 16, a lower blanket cylinder 18 and a lower plate cylinder 14. The upper plate cylinder 12, the upper blanket cylinder 16 and the lower plate cylinder 14 are each supported for movement by the use of bearing housings 40, 44 and 40, respectively. The lower blanket cylinder 18 is fixed in place. In this regard, note the discussion at Column 1, lines 31-35. More importantly, the upper plate cylinder 12, the upper blanket cylinder 16 and the lower blanket cylinder 14 are all provided with bearer rings 20. This is depicted at Fig. 1a and is discussed at Column 5, lines 20 and 21. The lower blanket cylinder 18 is not provided with a bearer ring.

In the Office Action of December 4, 2006, at the bottom of page 2 thereof, and continuing at the top of page 3, it is asserted that support elements 20 are provided on

the transfer cylinder 16 and on the counter-pressure cylinder 18. That statement is clearly incorrect, as is evident from a reading of Dawley. In fact, as recited in Dawley, the counter-pressure cylinder 18 is fixed in place and is not provided with a support element. Instead, the plate cylinder 12 and the blanket cylinder 16 are provided with the supports. This is not the same as, or similar to the structure recited in claim 26, as filed, and even more clearly as amended.

Claim 26, as amended by the addition of the language of dependent claim 28, recites that the means for adjusting the shaft distance between the forme cylinder and transfer cylinder is operable during an ongoing printing operation of the printing group to set the contact pressure between the forme cylinder and transfer cylinder. Dawley, in contrast, is directed to a printing unit whose object is to "...preset impression upon press production and assembly and to avoid readjustment in the field." Note Column 2, lines 49-51 in this regard. Additionally, Dawley recites, at the top of Column 3, at lines 2-5 that the disclosed invention allows for easy setting of compression parameters during assembly of the press in the factory so that there is no need for readjustments in the field. The discussion at Column 6, lines 33-36 reiterates this point and notes that "...a precise pressure between the respective bearers 20 surfaces can be set in the factory. The pressure will not need to be readjusted in the field later on..." Since the plate cylinder 12 and the blanket cylinder 16 of Dawley have the bearers 20, and since their impression forces are set in the factory, before the press is to be placed in use, it is clear that the interpretation of Dawley set forth in the Office Action is incorrect on these two points. Dawley thus clearly does not anticipate, or render obvious the subject invention, as recited in claim 26, as filed, and even more clearly as amended. The mere

recitation that the plate cylinder 12 is recited as being movably mounted does not anticipate, or render obvious the printing unit recited in claim 26.

Independent claim 29 recites a printing group of a rotary printing press with a forme cylinder, a transfer cylinder and a counter-pressure cylinder. Claim 29 further recites a waterless printing forme on the forme cylinder and means for adjusting a contact pressure between the forme cylinder and the transfer cylinder, during an ongoing printing operation of the printing group as a function of a property of the waterless printing forme. This structure is not shown, or suggested in the Dawley reference.

It is asserted in the Office Action that since Dawley does not specifically teach the use of water or any other dampening fluid, that the printing plate is a waterless printing plate. This assertion is clearly without merit or any semblance of support. It would be as logical to assert that the discussion of the structure of a piston in an engine would mean that the engine had to be a diesel engine because there was no discussion of a spark plug. The mere absence of a discussion of one component of a printing press cannot be construed as a positive teaching of its absence. The Dawley patent does not make any reference to a reel stand for supplying a web of paper to the printing unit. Can one thus recite that the Dawley printing unit is a sheet-fed unit? Clearly such an assertion would be incorrect. There must be some positive teaching of the absence of a feature of a printing unit to support a contention that such a feature is not there. Merely because Dawley does not positively recite the presence of a dampening unit does not mean that such a unit is not present. Dawley also does not positively discuss any type of inking unit. We can assume it is there because presses typically require ink

to print. However, we cannot make any assumptions regarding the specific nature of such an inking unit merely because we assume that it is there. Dawley is simply silent regarding the structure or composition of any of the printing plates which may be attached to the upper and lower plate cylinders 12 and 14, respectively. All that can reasonably be understood from the Dawley patent in this regard is that the cylinders 12 and 14 are plate cylinders and that they thus have plates on them. It is beyond any reasonable interpretation of the Dawley patent to infer that an absence of a positive recitation of a dampening unit can be taken as a positive teaching of the Dawley printing unit printing plates being waterless printing plates.

The rejection of claim 29 is not supported by any teaching or disclosure of the Dawley reference. Even if it could be somehow argued that Dawley could be considered as using a waterless printing forme, there is no teaching, or suggestion in Dawley of any means to adjust a contact pressure between the forme cylinder and the transfer cylinder, during an ongoing printing operation, as a function of a property of the waterless printing forme. As was discussed above, Dawley is directed to a printing unit in which the pressures between the several individual cylinders are set at the factory, so that they do not have to be adapted in the field. Dawley thus teaches away from an adjustment of contact pressures between the forme cylinder and the transfer cylinder either as a function of any property of a waterless printing forme and also during an ongoing printing process. Dawley thus clearly cannot anticipate, or render obvious the printing group as recited in currently amended claim 29.

With respect to claims 29 and 36, which recite that a shaft distance between the forme cylinder and the transfer cylinder is adjustable during operation of the rotary

printing press, the Office Action asserts that Dawley teaches this feature. In support, the Office Action notes that the plate cylinder 12 is recited as being movably mounted. Such an assertion does not overcome the clear language in Dawley that the precise pressures between the bearers is set in the factory, that it is not to be readjusted in the field and that the setting of the impression parameters is to be done during assembly of the respective pressure at the factory. Clearly, the Dawley reference does not teach the printing group of claim 26 and 29, as amended, or the features of claim 36.

The Office Action rejected a number of the claims which depend from believed allowable claim 29, as currently amended on the incorrect assertion that Dawley teaches a waterless printing forme and further that the means for adjustment of the contact pressure between the forme cylinder and the transfer cylinder, as a function of various characteristics of the printing forme as being a mental step. Such an assertion is clearly not correct. The characteristics of the waterless printing forme, of the printing ink and the like are all known characteristics. The means for adjusting the contact pressures between the forme cylinder and the transfer cylinder is discussed in the specification as being eccentric bushings. There is no mental process or calculation claimed. Additionally, as indicated above, Dawley does not teach or suggest any similar adjustment during an going operation of the printing group. Thus, Dawley does not anticipate, or render obvious these dependent claims.

The secondary references to Lewis and to Rau have both been reviewed. Neither appears to provide any of the teachings that are missing from the Dawley reference. The patent to Lewis is directed to a lithographic printing plate that can be imaged by a laser device. The patent recites that the laser imaging techniques can be

used with both wet and dry plates. Merely because Lewis states that “dry” plates can include silicone is not sufficient to combine Lewis with Dawley in any manner relevant to the claims of the subject application. Dawley does not teach, or suggest either wet or dry plates. Lewis merely teaches that a dry plate could include silicone.

The other secondary reference to Rau discloses a printing mechanism with means for cooling transfer and form cylinders. There is shown a waterless offset printing assembly that uses a forme cylinder and a transfer cylinder. One or both of these can be provided with an internal channel for the flow of a coolant. The Rau reference is however silent on supports for the cylinders and on the other aspects of the subject invention. The secondary reference to Rau thus does not provide any of the teachings which are missing from the Dawley reference.

The several references made of record by the Examiner, but not applied in the rejections of the claims, have been noted. Since they were not relied on, no further discussion thereof is believed to be required.

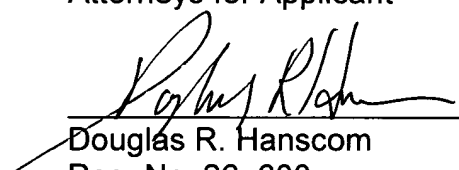
SUMMARY

Several of the claims of the subject U.S. patent application have been amended. One claim has been cancelled and the remainder have been carried forward. It is believed that the claims now pending in the subject application are patentable over the prior art cited and relied on, taken either singly or in combination. Allowance of the claims, and passage of the application to issue is respectfully requested.

Respectfully submitted,

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